

Abstract

A method for adapting a bus to data traffic in a system comprising several functional units (311, 312, ..., 31n) and a bus structure. The functional units are divided into at least two sets so that units, which mainly transfer data with each other belong to a same set and are interfaced with the same separate sub-bus (321; 322). The sub-buses can be united by switches (SW) into a more extensive bus, which is only used when data must be transferred between different sets. Supply voltage of each sub-bus is adjustable and is set the lower the less traffic there is on the bus. The parallel transfer operation makes it possible to increase the transfer capacity of the bus structure without increasing it's clock frequency. Furthermore energy consumption can be reduced by dropping the supply voltage of the bus circuits so that the bus retains the transfer capacity needed.

Fig. 3